

REMARKS

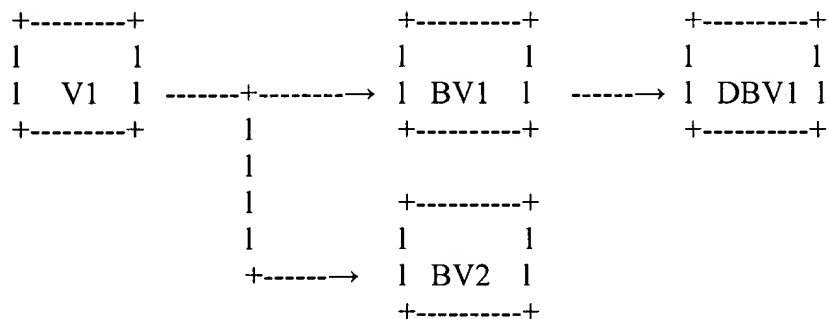
In response to the Office Action dated November 4, 2003, Applicants respectfully request reconsideration. To further the prosecution of the application, each of the rejections set forth in the Office Action has been considered and is addressed below. The Application as presented as is believed to be in allowable condition.

Initially, the undersigned thanks Examiner Thai for his courtesy in granting and conducting a telephone interview on February 4, 2004. The substance of the telephone discussion is summarized below.

In the Office Action, all of the claims continue to be rejected under 35 U.S.C. §103 as purportedly being obvious over Whiting. This rejection has been maintained in several Office Actions. For the reasons discussed in Applicants' response dated May 8, 2003, which is incorporated herein by reference, this rejection is respectfully traversed.

Each of the independent claims relates to the duplication of backup data. By contrast, Whiting is directed to a number of techniques for creating back up data. Whiting is entirely silent with respect to the duplication of any backup data.

In the prior response, the Figure below was presented in connection with a discussion concerning a three-level abstraction that helps illustrate the difference between the incremental backup performed by Whiting and the copying of backup data as recited in Applicants' claims.



Whiting is directed to the creation of backup data by copying at least some of the data from the volume V1 to a backup volume BV1. The incremental backup feature of Whiting refers to the creation of another backup volume (such as BV2), which, like the full backup volume BV1, is formed by reading data from the volume V1 and storing it on the backup storage

medium. (see e.g., the Abstract, “only those files which have changed since the previous backup are actually read from *the volume* and stored on the backup storage means.”).

Whiting relates only to techniques for creating backup data by reading data from the volume V1 and storing it on a backup storage medium (e.g., BV1 and BV2). Conversely, all of the pending claims relate to the duplication of backup data where data is copied from a backup storage medium (e.g., BV1) onto a duplicate backup storage medium such as DBV1.

The most recent Office Action concedes that Whiting does not “specifically teach copying/backing-up, only a subset of the backup data *from the at least one backup storage medium* as being amended.” (Office Action, page 3) (emphasis in original). However, the Office Action asserts that Whiting “clearly disclose” that the incremental backing up of only changed data from a previous backup “could have been happened from either (a) the original storage medium or (b) the back-up storage medium.” To the extent that this portion of the Office Action asserts that Whiting discloses the backing up of incrementally changed data from a backup storage medium, Applicants strongly disagree. There is no such disclosure in Whiting, and as discussed below, the technical aspects of performing an incremental backup make it impossible to perform that operation from the backup storage medium.

The Office Action then asserts that Whiting does not specifically disclose where the comparison of data is made for determining changes in performing an incremental backup, concludes that one of ordinary skill in the art would have recognized that the incremental backup data could be copied from a backup storage medium, and asserts that doing so would yield a quicker response time because the backup medium could have a smaller data capacity than the original data source. Applicants disagree.

Applicants respectfully assert that the Office Action evidences a misunderstanding of the technical nature of an incremental backup. An incremental backup involves taking a full backup of a particular data source at a given point in time, and then later backing up only the portions of the data source that have changed subsequent to the time when the initial backup was taken. Thus, by definition, the changed data is only found in the data set itself, and is not found on the original backup that was created of the data set. Therefore, an incremental backup simply can not be made by copying data from the previously backed up data set.

A simple example illustrates the point. Assume that a volume of data was provided to store information for a computer system. At the end of a first day, two files have been written to

the storage volume, i.e., file A and file B. At the end of that first day, a backup of the data volume can be made, and would include files A and B. During the next day, assume that an additional file C is written to the data volume, and that no changes are made to file A or B. At the end of the second day, an incremental backup can be performed on the data volume. The incremental backup will include only the changed pieces of data, so that it need not include either of files A or B, and can include only the newly-written file C. To create the incremental backup, the information relating to file C can not be read from the backup copy that was made the previous day, as that previous backup included only files A and B, and could not possibly have included the data for file C, which was written to the data set only after the original backup copy was made. Therefore, to perform the incremental backup, the data relating to file C can only be obtained from the original data source.

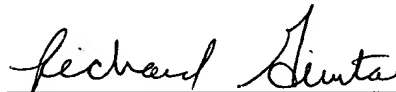
As should be appreciated from the foregoing, the assertion in the Office Action that one of ordinary skill in the art would have been motivated to perform the incremental backup of Whiting from a previous backup is simply incorrect, as it is technically impossible to do so. Thus, in view of fact that the Office Action concedes that Whiting does not teach the copying or backing up of a subset of backup data from at least one backup storage medium, it is respectfully asserted that the rejection of each of the claims should be withdrawn.

CONCLUSION

As discussed during the most recent telephone interview, Applicants believe that the claims as pending clearly distinguish over Whiting, as well as all of the other prior art of record. If the Examiner does not agree, he is respectfully requested to contact the undersigned at the number listed below to discuss any outstanding issues relating to the allowability of the application, and to reach a decision as to whether Applicants and the Examiner are at an impasse such that Applicants will need to consider the option of an appeal.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
Edgar St. Pierre, et al., Applicants



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